



Eco Mark News

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The “Eco Mark News” has been published since June 14, 1996 by Eco Mark Office in response to a revision of the “General Procedures for the Eco Mark Program”. In this “Eco Mark News”, the information related to the Eco Mark Program, such as newly selected Eco Mark product category and proposals for certification criteria, is provided on the basis of the “General Procedures for the Eco Mark Program”.

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Meeting of the Eco Mark Committee for Establishing Category and Criteria (7th) and Decisions

The seventh meeting of the Eco Mark Committee for Establishing Category and Criteria (Chairman: Prof. Takashi Gunjima, Doshisha University, Faculty of Economics) was held on August 24, 2000 at the Japan Environment Association and the discussion led to the adoption of the following items:

<Decisions>

- Certification criteria for Eco Mark product category No.119 “Personal Computers” is established on Sept. 10, 2000.
- Secondly assessments were carried out for the 21 newly proposed categories at the sixth meeting of the Eco Mark Committee for Establishing Category and Criteria and “Mattress made of recyclable textile material” was determined to continue a study.
- Primary assessments were carried out for the 26 newly proposed categories at the seventh

meeting of the Eco Mark Committee for Establishing Category and Criteria and none of them was selected as a product category to be secondarily assessed.

- Work for revision of Eco Mark product categories was determined to perform according to a master plan and 3 working groups were determined to establish in order to review or develop the product categories, “Printers”, “Prints” and “Compost and raw garbage disposers”
- Product category No.57 “Fancy Sound-Absorption Panels of Iron-Slag Mineral Wool” was determined to revise as proposed in the 13th Eco Mark Committee for Product Certification. And product category No.115 “Wooden Products Using Waste Wood, Thinned-out Wood, small-diameter Logs, etc.” was also determined to revise as proposed in the 15th Eco Mark Committee for Product Certification.

Establishment of Certification Criteria for New Product Category No.119, “Personal Computers”

The certification criteria for new product category, which had been made public as a tentative plan of Eco Mark new product category “Personal Computers” in the 18th Eco Mark News (issued on April 15, 2000), was corrected based on the public comments drawn after publication and was discussed at the seventh meeting of Eco Mark Committee for Establishing Category and Criteria. As a result, the certification criteria was approved and decided to establish on Sept. 10, 2000 as shown in Annex 1, Eco Mark Product Category No.119 “Personal Computers”.

Revision of Certification Criteria for Product category No.57 “Fancy Sound-Absorption Panels of Iron-Slag Mineral Wool”

After the Certification criteria of the product category No.57, “Fancy Sound-Absorption Panels of Iron-Slag Mineral Wool” were studied at the 7th meeting of the Eco Mark Committee for Establishing Category and Criteria on August 24, 2000, a decision was made to revise some wording on Sept. 8, 2000 as proposed in the 13th Eco Mark Committee for Product Certification.

<Reasons for the Revision>

It is necessary to clarify rules of fire prevention.

<Provisions to be revised>

Before Revision:

“1. (3)Regarding fire prevention, the product shall meet the standards set out in the Nonflammable Materials No.1021 “Mineral Wool Sound-Absorption Panel” and the Flame Resistant Materials Standards No.2026 “Mineral Wool Sound-Absorption Panels (Fancy)”.

After Revision:

“1. (3)Regarding fire prevention, the product shall meet the standards set out in the Nonflammable Materials No.1021 “Mineral Wool Sound-Absorption Panel” or the Flame Resistant Materials Standards No.2026 “Mineral Wool Sound-Absorption Panels (Fancy)”.

<Date of Revision>

Sept. 8, 2000

Revision of Certification Criteria for Product category No.115 “Wooden Products Using Waste Wood, Thinned-out Wood, Small-diameter Logs, etc.”

After the Certification criteria of the product category No.115, “Wooden Products Using Waste Wood, Thinned-out Wood, Small-diameter Logs, etc.” were studied at the 7th meeting of the Eco Mark Committee for Establishing Category and Criteria on August 24, 2000, a decision was made to revise some wording on Sept. 8, 2000 as proposed in the 13th Eco Mark Committee for Product Certification.

<Reasons for the Revision>

It is necessary to clarify rules of test methods.

<Provisions to be revised>

Before Revision:

“5. (8) with JIS A 5908 5.9 for formaldehyde release testing

After Revision:

“5. (8) with JIS A 5908 5.11 for formaldehyde release testing

<Date of Revision>

Sept. 8, 2000



Eco Mark Product Category No.119

“Personal Computers”Japan Environment Association
Eco Mark Office**1. Environmental Background**

With respect to personal computers, at the 15th Eco Mark Promotion Committee Meeting on July 21, 1995, it was proposed that consideration need to be given to electrical consumption, hazardous substances, recycling, etc. so as to reduce the environmental impact of the products for the use at home & office and that the products should be subject to the Eco Mark certification. Since then, an investigation has been under way as to whether or not the Eco Mark certification criteria should be established for the products along with copiers proposed at the same time. The Outline of Eco Mark Project Implementation was revised in March, 1996 and some conditions such as paying consideration to the products lifecycle and international tendency in proceeding investigation were added as well as the revision of investigation method such as the establishment of the Working Group.

In order to cope with these conditions, the 19th Eco Mark Promotion Committee Meeting on July 4, 1997 examined whether or not Personal Computers were the product subject to the Eco Mark Certification and decided the products should be the subject, and at the same time provided for setting up a working group for the establishment of Eco Mark Certification Criteria.

Recently, the production of Personal Computer has remarkably increased, with their use at home & office becoming more and more popular. Moreover, in addition to the expansion of new users, there is a large demand for replacement due to the fast advancement of the related technology.

Six organizations in Germany and three North European countries specify Personal Computer as the products subject to the Environmental Labels, setting up their certification criteria, while in Japan, a Purchase Guideline in line with the “Green Purchasing Network” was released in November 1997, with an increasing concern of Personal Computer as the environmental impact reduced products to be selected both domestically and internationally.

In the revision of “Law concerning the Rational Use of Energy” in June 1998, the promotion policy of a further improvement of energy efficiency by the top runner method is presented. With respect to the energy saving aspect in such a using process, the Energy Star already exists as an Environmental Label mutually certified between Japan and the United States. However, as mentioned above, the reduction in the environmental impact throughout the life cycle of the products is requested for Personal Computer and the certification of the Eco Mark is meaningful considering such a respect.

Also, Personal Computer is an internationally distributed product and a reasonable consideration need to be given for the compliance with international trend in establishing certification criteria. In April 1999, the Type I Label Standard for the Third Party Certification Label applicable to the Eco Mark was established as an Environmental Label Standard of the ISO. The Eco Mark has already taken steps to conform to the contents of the Standard.

Japan joins GEN (Global Ecolabelling Network-involving 25 member countries around the world including U.S. and Germany), strengthening and promoting the links with the Environmental Label Systems of various countries.

GEN is proceeding with activities towards its stated target of mutual certification of criteria between each country in the future. Therefore, applying the Eco Mark to such internationally distributed products as Personal Computer will be very significant as a role model.

2. Scope of Applicable Products

Personal Computers among “electronic computers and related devices” under the Japanese Standard Product Classification (hereinafter PC) consisting of general desktop-type PC and notebook-type PC.

In this category, desktop-type personal computers are defined as personal computers installed for use in one location such as on the desk.

The apparatus shall consist of system unit, CRT monitor, LCD monitor, keyboard and mouse.

In this category, notebook-type (portable) computers refer to those designed for use in multiple locations.

3. Terminology

- Reusable: Characteristics of designed products or packaging assuming to be able to use several times repeatedly for any expected purpose in the life cycle.
- Recycling: Refers to material recycling. Energy recovery (thermal recycling) is excluded.
- Batteries: Refers to primary and secondary batteries. Primary batteries are those that discharge only once, while secondary batteries can be recharged for repeated use.
- Recycled plastic raw materials: Plastic raw materials derived from pre-consumer and post-consumer materials.
- Pre-consumer materials: Materials or rejects obtained from the waste route during the manufacturing process. Excluded are materials generated in the manufacturing process and reused in the same process (factory) in which they were generated.
- Post-consumer materials: Materials or products scrapped after their intended use.
- Constituents: Material components added for intended purpose to give any characteristics to the products. Impurities that are technically unavoidable in the manufacturing process are not included.
- Minimum retaining period: The period shall start from the termination of the production by the manufacturer of the products using the parts having such performance.
- Homopolymer: Single polymer. Polymer of a single kind of monomer.
- Copolymers: Polymer of more than two kinds of monomer.
- Polymer Alloy(Polymer Blend): Generic name of multi element system high molecule obtained by mixture or chemical combination of high molecules more than two elements. Physically mixed different kind of high molecule is called a polymer blend.

4. Certification Criteria

4-1. Environmental Criteria

A. System Unit (desk-top type PC)

A-1. Designed for Recycling

Designed for Recycling and Long-Term Use

- (1) The appliance shall comply to “Suitable design for recycle of appliance” in Appendix 1, based on the “Guideline of preparing a pre-evaluation manual in products designing to contribute to the promotion etc. of the use of the recycled resource (the Waste Disposal and Recycling Committee of the Industrial Structure Council in July, 1994)”. However, Appendix 1 need not be applied when an applicant receives absolutely all appliances with the Eco Mark for the reuse or recycling.
- (2) The applicant shall undertake to hold the performance spare parts (parts indispensable to maintain the function of the product are called the performance parts) for a repair of appliances for at least 5 years.
- (3) The applicant shall systematically prepare to undertake repairs of appliances with the Eco Mark, performing repairs at the request of the appliance users.
To systematically prepare, 1) Information regarding undertaking of repairs shall be furnished, and 2) Information regarding the scope of repairs (servicing contents), required time, expenses, and processing flow chart for the appliance users shall be provided.

Parts made of plastic materials

- (4) Parts made of plastic shall be produced from a homopolymer or a copolymer. Polymer blends (polymer alloy) shall be allowed. However, parts weighing less than 25g are excluded.
- (5) The plastic case parts shall consist of two separable polymers or polymer blends at the most. However, case parts weighing less than 25g are excluded.
- (6) Large -size case parts made of plastic shall be so designed as to ensure to recycle as plastic materials. However, case parts weighing less than 25g or having a flat area less than 200mm², that are not subject to marking requirements, are excluded.

Batteries

- (7) Batteries shall be so designed as to ensure the user to change or remove them. (It means corresponding to A, B or C in attached table 1.) Excluded are batteries installed in the printed circuit board, etc. that are not designed for removal by users.
- (8) Batteries installed in the printed circuit board, etc. that are not designed for removal by the users shall have a minimum service life of 10 years. In addition, such batteries shall be designed so as to allow their removal without having to change the entire printed circuit board or the like of it at the end of their service life or at the repair. (It means corresponding to from A to F in attached table 1.)

A-2. Resumption and Recycling System

- (9) The applicant at the request of the user of appliances undertakes to withdraw his/her appliances with the Eco Mark after use in order to forward them for reuse or recycling,

respectively. Non-reusable parts of the appliances shall be treated and or disposed of in an environmentally acceptable manner (inclusive of thermal recycling). The applicant may refuse to withdraw his/her appliance after use if said appliances are inappropriately converted by the user from the viewpoint of reusing, recycling and environmentally acceptable treatment & disposal.

- (10) The applicant at the request of the user of appliances undertakes to accept the return of used original secondary batteries the user wishes to replace and to forward them for reusing, recycling or proper disposal.

A-3. Chemical Substances

Plastic Materials

- (11) Neither polymer that contains the halogen nor the organohalogen compound shall be used as constituents for the case and case parts.

However, the organofluorine additives (for instance, the content of 0.5 percent by weight or less in anti-dripping agent) used to improve a physical characteristic of plastic materials and electric wire coating film are excluded. This item need not be applied when an applicant receives absolutely all appliances with the Eco Mark for the reuse or recycling.

- (12) Neither PBBs (Polybrominated biphenyls) nor PBDEs (Polybrominated diphenyl ethers) nor chlorinated paraffins (Chain C number 10-13, chlorine content concentration in excess of 50%) shall be used as constituents for plastics.

- (13) Neither cadmium nor lead shall be used as constituents for the case and case parts .

- (14) Neither of the following shall be used as constituents for the case and case parts.

A) Substances classified in carcinogenic substances (Level 1, 2A, and 2B) listed by IARC (International Agency for Research on Cancer).

B) Carcinogenic substances ((Classes 1, 2 and 3) according to the MAK list, mutagenic and teratogenic substances.

Batteries

- (15) Batteries shall contain no cadmium, lead, or mercury as constituents.

This item need not be applied to batteries installed in the printed circuit board, etc. that are not designed for removal by users when an applicant receives absolutely all appliances with the Eco Mark for the reuse or recycling.

- (16) Batteries shall be marked according to the identification guidelines for compact rechargeable batteries of the Battery Association of Japan.

Printed Circuit Board

- (17) Neither PBBs nor PBDEs nor chlorinated paraffins shall be used as constituents for the base material of printed circuit boards. Printed circuit boards refer to those in the conditions excluding semi-conductors etc.

Manufacturing Stage

- (18) The applicant shall declare non-use of CFCs listed in attached table 2, carbon tetrachloride and trichloroethane and non-emission of HCFCs in attached table 2 at

the final assembly factory by way of certificates issued by the Works Manager.

Also, as for the emission of hazardous substances, the applicant shall have provisions that clarify compliance with the relative Environmental Laws and Pollution Prevention Agreement, etc. of the region in which the factory is located.

The applicant shall show non-use of CFCs listed in attached table 2, carbon tetrachloride and trichloroethane and non-emission of HCFCs in attached table 2 from the direct parts suppliers' factories by way of certificates issued by the Works Manager. However, instead of certificates issued by the Works Manager, Parts Procurement Contracts with the applicant's direct parts suppliers may be used.

A-4. Energy Consumption

- (19) The system unit shall conform to the Energy Star Program prevailing at the time the application for the Eco Mark is made.
- (20) The system unit shall conform to "Judgment Criteria concerning Car and Home Electric Appliances and the office automation appliance (energy-saving criteria)" provided for by "Law concerning the Rational Use of Energy" at the time the application for the Eco Mark is made.
- (21) The appliance shall be equipped with an ON/OFF switch. In the "OFF" mode, the power consumption shall not exceed 1 watt. Provided that the controller must perform an additional function in the "OFF" mode (e.g. power supply for clock, monitoring of wake signal by modem or LAN, monitoring of battery charging and LED indication showing active state of appliance etc.), the permissible maximum power consumption shall be 5 watts at the most.
- (22) It shall be possible to disconnect the appliance from the external power for a long time (at least 4 weeks) without damage to the operability of the appliances (loss of timer information, such as date and time, is not considered as damage).

A-5. Noise Emission

- (23) "Declared sound level" according to para 3.2.5. of ISO 9296 shall not exceed 48dB during the idle state of the appliances. During other operating modes (access to floppy disk or hard disk), shall not exceed 55dB.

A-6 Furnishing of Information

A-6.1 Design for Recycling and Long-term Use

- (24) The User Manual shall contain information on design suitable for recycling appliance, minimum retaining period of repair performance parts and how to comply with items concerning repair provided in (1), (2) and (3).
- (25) The User Manual shall contain information regarding how to change the batteries. Excluded are batteries installed in the printed circuit board, etc. that are not designed for removal by users.

A-6.2. Resumption and Recycling System

- (26) The User Manual shall contain information with respect to taking used appliance back for reuse or recycling as per information regarding conformance to the provision stated in (9).

Example of Information Concerning Resumption

“This appliance will be withdrawn by means of XX when exhausted as industrial wastes after used. Please contact YY.”

- (27) The User Manual shall contain information on withdrawal of used batteries and their recycling or disposal as wastes as an information concerning compliance with the items which are set forth in (10).

A-6.3. Chemical Substances

- (28) In the event that substances such as cadmium, cyanogen, lead, chrome, the arsenic, mercury, fluorine, boron, selenium, PCB and antimony are used for the appliances, the appliance user shall be furnished with information to that effect.

Information-furnishing

example: “Heavy metals (describe substance names such as cadmium and fluorine in parentheses) are used for XX (printed circuit board, disk, etc.) of this appliances. (Please return the appliances for recycling after use.)”

- (29) The User Manual shall include the following or similar note:
“Batteries containing any heavy metals shall not be disposed of with general household waste. To ensure they are forwarded for recycling or proper disposal, they may be returned to the manufacturer, dealer or their agency for recycling or appropriate processing.”

A-6.4. Energy Consumption

- (30) The applicant shall include detailed information in the User Manual regarding the power consumption in the “OFF” mode and shall emphasize that the only way to rule out such energy consumption is to disconnect the appliance from the electrical circuit plug socket.
- (31) The User Manual shall state the maximum power consumption in the operating mode, the minimum power consumption in the operating mode (i.e. energy consumption when not running input or output processes).

A-7. Safety

- (32) The appliances shall comply with safety standards conforming to the International Electro-technical Commission (IEC) 950.
- (33) Electromagnetic conformance shall conform to VCCI (Voluntary Control Council for Interference by Information technology equipment).

B.CRT Monitor

B-1. Designed for Recycling

Designed for Recycling and Long-term Use

- (1) to (3) are the same as A-1 (1) to (3).

Parts which use plastic materials

- (4) to (6) are the same as A-1 (4) to (6).

Batteries

(7) and (8) are the same as A-1 (7) and (8).

B-2. Recovery and Recycling System

(9) and (10) are the same as A-2 (9) and (10).

B-3 . Chemical Substances

Plastic materials

(11) to (14) are the same as A-3 (11) to (14).

Batteries

(15) and (16) are the same as A-3 (15) and (16).

Printed Circuit Board

(17) is the same as A-3 (17).

Manufacturing Stage

(18) is the same as A-3 (18).

B-4. Energy Consumption

(19) The monitor shall conform to the Energy Star Program prevailing at the time the appliance is applied to the Eco Mark.

(21) is the same as A-4 (21).

(22) is the same as A-4 (22).

B-5. Noise Emission

(23) is the same as A-5 (23).

B-6. Furnishing of Information

B-6.1. Designed for Recycling and Long-Term Use

(24) and (25) are the same as A-6 (24) and (25).

B-6.2. Recovery and Recycling System

(26) and (27) are the same as A-6 (26) and (27).

B-6.3. Chemical Substances

(28) and (29) are the same as A-6 (28) and (29).

B-6.4. Energy Consumption

(30) is the same as A-6 (30).

(31) The User Manual shall state the maximum power consumption in the operating mode, the minimum power consumption in the operating mode (i.e. energy consumption when not running input or output processes) as well as the power consumption in the two static states (sleep mode and deep sleep mode).

B-7. Safety

(32) and (33) are the same as A-7 (32) and (33).

C. LCD monitor

C-1. Designed for Recycling

Designed for Recycling and Long-term Use

(1) to (3) are the same as A-1 (1) to (3).

Parts which use plastic materials

(4) to (6) are the same as A-1 (4) to (6).

Batteries

(7) and (8) are the same as A-1 (7) and (8).

C-2. Resumption and Recycling System

(9) and (10) are the same as A-2 (9) and (10).

C-3. Chemical Substances

Plastic Materials

(11) and (14) are the same as A-3 (11) and (14).

Batteries

(15) and (16) are the same as A-3 (15) and (16).

Printed Circuit Board

(17) is the same as A-3 (17).

Manufacturing Stage

(18) is the same as A-3 (18).

C-4. Energy Consumption

(19) The monitor shall conform to the Energy Star Program prevailing at the time the appliance is applied to the Eco Mark.

(21) is the same as A-4 (21).

(22) is the same as A-4 (22).

C-5. Noise Emission

(23) is the same as A-5 (23).

C-6. Furnishing of Information

C-6.1. Designed for Recycling and Long-term Use

(24) And (25) is the same as A-6 (24) And (25).

C-6.2. Resumption and Recycling System

(26) and (27) are the same as A-6 (26) and (27).

C-6.3. Chemical Substances

(28) and (29) are the same as A-6 (28) and (29).

C-6.4. Energy consumption

(30) is the same as A-6 (30).

(31) The User Manual shall state the maximum power consumption in the operating mode, the minimum power consumption in the operating mode (i.e. energy consumption when not running input or output processes) as well as the power consumption in the two static states (sleep mode and deep sleep mode).

C-7. Safety

(32) and (33) are the same as A-7 (32) and (33).

C-8. Display (LCD)

(34) Neither substances classified into cancer-causing substances by IARC (Level 1, 2 A and 2B) nor cancer-causing substances in MAK list (Class 1, 2 and 3) shall be used as constituents. However, mercury and mercury compounds are excluded.

D. Keyboard and Mouse

D-1. Designed for Recycling

Designed for Recycling and Long-term Use

(1) to (3) are the same as A-1 (1) to (3).

Parts made of plastic materials

(4) to (6) are the same as A-1 (4) to (6).

Batteries

(7) and (8) are the same as A-1 (7) and (8).

D-2. Resumption and recycling system

(9) and (10) are the same as A-2 (9) and (10).

D-3. Chemical Substances

Plastic materials

(11) to (14) are the same as A-3 (11) to (14).

Batteries

(15) and (16) are the same as A-3 (15) and (16).

Printed Circuit Board

(17) is the same as A-3 (17).

Manufacturing Stage

(18) is the same as A-3 (18).

D-4. Furnishing of Information

D-4.1. Designed for Recycling and Long-term Use

(24) and (25) are the same as A-6 (24) and (25).

D-4.2. Resumption and Recycling System

(26) and (27) are the same as A-6 (26) and (27).

D-4.3. Chemical Substances

(28) and (29) are the same as A-6 (28) and (29).

D-5. Safety

(32) and (33) are the same as A-7 (32) and (33).

E. Note type PC

E-1. Designed for Recycling

Designed for Recycling and Long-term Use

(1) to (3) is the same as A-1 (1) to (3).

Parts made of uses Plastic Materials

(4) to (6) are the same as A-1 (4) to (6).

Batteries

(7) and (8) are the same as A-1.

E-2. Resumption and Recycling System

(9) and (10) are the same as A-2 (9) and (10).

E-3. Chemical Substances

Plastic materials

(11) to (14) are the same as A-3 (11) to (14).

Batteries

(15) and (16) are the same as A-3 (15) and (16).

Printed Circuit Board

(17) is the same as A-3 (17).

Manufacturing Stage

(18) is the same as A-3 (18).

E-4. Energy Consumption

(19) The note-type PC shall conform to the Energy Star Program prevailing at the time

the application for the Eco Mark is made.

(20) The note-type PC shall conform to “Judgment Criteria concerning Car and Home Electric Appliances and the office automation appliance (energy-saving criteria)” provided in “Law concerning the rationalization of the use of energy (conservation of energy law)” at the time the application is made for the Eco Mark.

(21) is the same as A-4 (21).

(22) is the same as A-4 (22).

E-5. Noise Emission

(23) is the same as A-5 (23).

E-6. Furnishing of Information

E-6.1. Designed for Recycling and Long-term Use

(24) and (25) are the same as A-6 (24) and (25).

E-6.2. Resumption and Recycling system

(26) and (27) are the same as A-6 (26) and (27).

E-6.3. Chemical Substances

(28) and (29) are the same as A-6 (28) and (29).

E-6.4. Energy Consumption

(30) is the same as A-6 (30).

(31) The User Manual shall state the maximum power consumption in the operating mode, the minimum power consumption in the operating mode (i.e. energy consumption when not running input or output processes) as well as the power consumption in the two static states (sleep mode and deep sleep mode).

E-7. Safety

(32) and (33) are the same as A-7 (32) and (33).

E-8. LCD Display

(34) is the same as C-8 (34).

F. The User Manual

(35) The paper of the user manual issued and provided by the applicant together with the product shall meet the requirements of the Eco Mark Certification Criteria “for printing paper” (use of paper with the Eco Mark is not required).

G. Packaging Materials (The user manuals of the basic software issued beyond applicant responsibility and CD-ROM cases are excluded.)

(36) Plastics used for product packaging shall be marked according to ISO11469.

(37) The packaging material shall conform to the “Guidelines on the Preparation of Pre-assessment Manual for Product Design Contributing to the Promotion, etc. of the Utilization of Recycled Resources (July 1994, Industrial Structure Review

Committee - Waste Disposal and Resources Recycling WG)”.

(38) Neither CFCs nor HCFCs listed in the attached table 2 shall be used in the packaging material.

(39) Neither halogen-containing polymers nor organohalogen compounds shall be used as constituents for plastic materials used for packaging appliances.

4-2. Quality Criteria

None

5. Certifying Conformity to Certification Criteria (Among A to G)

(1) Reference documents certifying compliance with respective criteria shall be attached to the application form.

Moreover, at the time of examination, the applicant shall be ready to provide one applied product ensuring it in compliance with these criteria.

(2) With respect to Certification Criteria 4-1 (1), the applicant shall submit the “Design suitable for recycling the appliance” as per Appendix 1, after filling out necessary items. When an applicant receives absolutely all appliances with the Eco Mark for the reuse or recycling, the recovery, re-use or recycling system (recovery system, processing capacity and processing details, etc.) shall be well established.

(3) With respect to Certification Criteria 4-1 (2), a certificate for the minimum retaining period of repair performance parts shall be submitted. The user manual etc. clearly describing this matter shall be submitted.

(4) With respect to Certification Criteria 4-1 (3), a certificate for performing repair works at the request of the appliance users shall be submitted. The user manual clearly stating that the system (repairing capacity, contents of furnished information provided by the criteria) is well established shall be submitted.

(5) With respect to Certification Criteria 4-1 (4), (5) and (6), certificates clearly stating that the applicant complies with this provision shall be submitted. The list (appendix 2) of the plastic materials used shall be submitted.

(6) With respect to Certification Criteria 4-1 (7) and (8), certificates regarding where batteries are used and how to remove it in accordance with attached table 1 shall be submitted.

(7) With respect to Certification Criteria 4-1 (9) and (10), detailed descriptions stating that recovery, re-use, recycling or proper disposal system (recovery system, processing capacity and processing details, etc.) are well established shall be submitted.

(8) With respect to Certification Criteria 4-1 (11), the form in appendix 2 filled out with names of the raw material suppliers, etc. shall be submitted. The form in appendix 2 shall clearly show whether any polymer and organohalogen compounds are added.

(9) With respect to Certification Criteria 4-1 (12), parts bought notes or something else shall clearly show neither PBB (Polybrominated biphenyl's) nor PBDE (Polybrominated biphenyl ethers) nor chlorinated paraffin's (Chain C number 10-13, chlorine content concentration in excess of 50%) is used as constituents for plastics.

(10) With respect to Certification Criteria 4-1 (13) and (14), a certificate clearly stating compliance with this item shall be submitted.

(11) With respect to Certification Criteria 4-1 (15), a certificate issued by the battery

- manufacturer shall be submitted.
- (12) With respect to Certification Criteria 4-1 (16), a certificate stating whether the marking is or not shall be submitted.
 - (13) With respect to Certification Criteria 4-1 (17), a certificate issued by the raw material (print circuit board) supplier shall be submitted. The name of flame retarder used in it shall be described in the certificates.
 - (14) With respect to Certification Criteria 4-1 (18), a certificate issued by the Works Manager of manufacturing the product stating that the factory has been observing the environmental laws etc. of the region where the factory is located for the past five years before the application, without any breach. However, instead of certificates issued by the Works Manager, Parts Procurement Contracts with the applicant's direct parts suppliers may be used.
 - (15) With respect to Certification Criteria 4-1 (19), a certificate of compliance with Energy Star program (a copy of application for products using Energy Star logo mark etc.) shall be submitted.
 - (16) With respect to (20) (21) and (22), a certificate clearly stating the compliance with this item shall be submitted.
 - (17) With respect to Certification Criteria 4-1 (23), a test record shall be submitted.
 - (18) With respect to Certification Criteria 4-1 (24) to (31), corresponding pages of the User Manual shall be submitted.
 - (19) With respect to Certification Criteria 4-1 (32), a certificate stating compliance with the safety specification in accordance with IEC950 shall be submitted.
 - (20) With respect to Certification Criteria 4-1 (33), a certificate stating compliance with VCCI (a copy of application for compliance certification etc.) shall be submitted.
 - (21) With respect to Certification Criteria 4-1 (34), a certificate clearly stating compliance with this item shall be submitted.
 - (22) With respect to Certification Criteria 4-1 (35), the brand of the papers used and the name of the paper manufacturer shall be described. The certificates required in the Eco Mark Certification Criteria No.107 "Printing paper" shall be submitted when the paper with the Eco Mark is not used.
 - (23) With respect to Certification Criteria 4-1 (36), a certificate stating whether the marking is or not shall be submitted.
 - (24) With respect to Certification Criteria 4-1 (37), compliance with the Guideline shall be stated. Concretely, primary the packaging material shall be selected in accordance with the to the assessment manual based on the guidelines. (The document that shows contents of the manual shall be submitted.) Secondary the name of the selected packaging material shall be submitted.
 - (25) With respect to Certification Criteria 4-1 (38), a certificate issued by the packaging material supplier shall be submitted. The certificate shall clearly describe whether CFCs, HCFCs are used or not.
 - (26) With respect to Certification Criteria 4-1 (39), a certificate issued by the plastic packaging material supplier shall be submitted. The certificate shall cleanly describe the name of the plastic materials used, showing whether any polymer and organohalogen compounds are added.
 - (27) With respect to 19 and 20 in Appendix 1, a copy of the written records shall be submitted.

6. Others

- (1) The product classification shall be identified for each brand. Colors or dimensions shall not identify such classification. It is possible to apply as one application in case of each appliance falls under the same series; however, each appliance within the series shall comply with respective criteria.

In the product classification, the constituent appliance of the desktop-type PC can apply individually for each appliance.

In case of the products mainly sold as a set, system unit, CRT monitor, LCD monitor, keyboard and mouse can be brought together in the same application.

In case of the set sales, each appliance shall meet respective criteria within the set sales.

When applying, the product attaching the user manual shall conform to the criteria of the user manual as well as complying with those of the appliance applied.

The product that uses packaging materials at the time of shipment shall conform to the criteria of the packaging materials as well as complying with those of the appliance applied.

- (2) Eco Mark lettering shall be “Saving Resource, Energy Conservation and Fewer Waste”.

Moreover, in order to support the above-mentioned representation at the lower section of the mark, environmental information may be provided for CP unit, CRT monitor, LCD monitor and note type PC. In this case, the mark shall be featured in five step display boxed by a rectangular frame and left- justified as follows:



Establishment: Sept 10, 2000

These certification criteria for the product category will be reviewed in five years after the date of enactment, and the certification criteria and/or the product category will be revised or abolished.

Appendix 1

Checklist "Suitable design for recycling of appliance"(This table is a checklist based on the environmental criteria 4-1. (1))

Requirement Category M: Requirement that shall be achieved

Category S: Requirement that should be achieved

It is deemed that the requirement for "a suitable design for recycling" has been satisfied when all of the "M" requirements are answered "Yes".

Pertinent units: System unit, CRT monitor, LCD monitor, Keyboard, Mouse and Note type PC

	Requirement	Object sub-assembly	Category	Achievement
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Simplification of use as reuse parts or recycled resources

1	Are the kind of material of the parts having comparable function limited to one kind?	Case and chassis	M	Yes/No
	Efficiency improves for the product containing fewer kinds of materials in the process of detaching and separation. Concretely, this item is not complied with when a case sub-assembly is composed of a different material.			
2	Has an immediate print on the plastic part been limited to required minimum (The example: manufacturer name)?	Case	S	Yes/No
	When the plastic parts with a paint layer of a large area in the surface are recycled, the removal process is required. The laser-marking etc. is not included in the "Print" shown in this item. This item is not applied to the paint of which resource is the same as the plastic part.			
3	Are recycled plastic parts used ?	Case and chassis	S	Yes/No
	Neither PBB nor PBDE nor chlorinated paraffin shall be used.			

Simplification of separation and decomposition (The simplification of crushing and incineration is included)

4	Are sub-assemblies, which are produced by materials listed in attached table 3, detachable or united by means of any assistance parts for separation?	Case parts, chassis, and electronic sub-assembly	M	Yes/No
	Because combination between "the case and the chassis" and "the chassis and the electronic sub-assembly" is important, separability shall be a prerequisite 1) to reuse and to recycle by separating the sub-assembly and the material and 2) to remove parts that contain the hazardous substances. "Separation supporting area " means a scheduled destruction area etc. For instance, the conformance matrix can check "Conformance" between materials (Refer to VDI2243). See 4.3 of VDI2243 sheets 1 (especially, Table 2) for instance for "Conformance matrix" referred here.			
5	Can combination parts to be separated be easily found?	Case and chassis	S	Yes/No
	The combination parts to be separated when decomposing should be found easily and promptly. An instruction should be so attached in the product when such a part is in the hidden place.			
6	Can decomposition for recycling be made only with general tools?	Case, chassis, and electronic sub-assembly	M	Yes/No
	"General tools" mean those sold generally on the market.			
7	Is a grip point and workspace considered necessary for the decomposition tool?	Case, chassis and electronic sub-assembly	M	Yes/No
	The grip point means the point of the combination part to which a greater power is transferred by the tool. And, an enough workspace shall be available to carry out the decomposition work with the tool. Contrary to the assembly process, a snap connecting which requires the tool in decomposition shall especially be the subject of this requirement.			

8	Can we put the hand axially to all of the connecting elements to be decomposed?	Case, chassis, and electronic sub-assembly	S	Yes/No
	If it is difficult or impossible to enter the hand directly in the connecting part to be decomposed, more man-hours are required. For instance, it takes time to decompose the screw connection when the hand enters only from the direction of the radius.			
9	Is a uniform screw head (i.e. cross ditch) used for connecting between sub-assembly?	Case, chassis, and electronic sub-assembly	S	Yes/No
	The standardized uniform connecting element makes the decomposition work easy. The fewer tools exchange brings the more simplified decomposition and assembly works.			
10	Can a man separate a snap connecting which should be separated at the same time?	Case and chassis	S	Yes/No
	For instance, when the undercut angle is 90° or more, the snap connecting with the same connecting directions as arbitrary numbers can be united at the same time, but it is not always possible to solve this. This requirement is applicable when two uniting or more should be solved at the same time.			
11	Can all decomposition processes be performed without changing receiving face?	The whole unit	S	Yes/No
	This requirement checks whether the unit indirectly has the layered structure. Assembly/handling man-hours can be reduced for the layered structure.			
12	Is the number of electronic sub-assembly fixed to the case zero?	Case and electronic sub-assembly	M	Yes/No
	For enabling a clean and prompt performance of removal and separation of the hazardous substances of the material group of the electric circuit, all electronic sub-assembly shall be fixed to the chassis. Electronic parts shall not be fixed to the case.			
13	Does the product have the modular structure (This item is applied only to the chassis)?	Chassis	M	Yes/No
	In the product structure of the modular, a function group is achieved as a sub-assembly. When the improvement or enhancement of the system performance is required, the whole body of the product need not be replaced.			

Simplification of classification of parts etc.

14	Are the plastic parts provided with the marking in accordance with by ISO11469? The parts of less than 25g in weight or less than 200mm ² in areas of the flat part are excluded.	Parts of 25g or 200mm ²	M	Yes/No
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Securing of safety when processing and disposing etc.

15	Are parts which contain the hazardous substances easily found, and removable?	Electronic sub-assembly	M	Yes/No
	Hazardous substances: Chemical Substances provide by the Certification Criteria. Or materials provided by law etc.			

Use of reusable parts and recycled resources

16	Can the reproduced sub-assembly be built in (This item is applied only to system unit)?	Chassis and electronic sub-assembly	S	Yes/No
	It is preferable to the manufacturers that reproduced parts are possible to build in the appliances as spare parts or as ETN (equivalent to new) parts. "ETN parts" mean any reproduced parts similar to new parts. The examination is to ensure that it can be included as a specification.			

Long-term use

17	Can the function for enhancing the system performance be expandable? (This item is applied only to the chassis).	All sub-assemblies	M	Yes/No
	For the system performance improvement, a specific condition shall be inherently prepared; thus the product life may be extended. Concretely, the processor, the GC·CD-ROM·CPU cash, the memory (HDD etc.) and the up-grade of RAM memory and the presence the expanded slot etc are enumerated.			

18	Can the function of system be expandable? (This item is applied only to system unit.)	All sub-assemblies	M	Yes/No
	Enhancing the function by installing the function of other appliances (television and facsimile) also enables the extension of the life of the product. The examination shall ensure a prerequisite enabling the extension of function. Example: Slot place			

21	Has the manufacturer carried out test decompositions according to 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, and 18, and recorded the results?	The whole unit	M	Yes/No
22	Has the materials been selected according to No.1, 2, 3, 4, 5, and 17, and put into writing?	Case and chassis	M	Yes/No

Attached table 1 Facility of disassembling a battery

Designation		Item		Example of item evaluation
Range	Sign	Classification	Subclass	
Easy	A	One-touch	one-touch	Power unit is off-line system, and battery (packing) can be taken out by one-touch
	B	Removal of cover by hand	one-touch	Removal of cover by hand is possible, and battery (packing) can be taken out by one-touch
			Connector removing	Removal of cover by hand is possible, and battery (packing) can be taken out by removing connector
	C	Removal of cover by screw	one-touch	Removal of cover by screw is possible, and battery (packing) can be taken out by one-touch
			Connector removing	Removal of cover by screw is possible, and battery (packing) can be taken out by removing connector
	D	Removal of cover by screw	Cutting	Removal of cover by screw is possible, and battery (packing) can be taken out by cutting the connection with nippers etc.
	E	Decomposition of the whole (screw removing)	Connector removing.	Decomposition of the whole by removing screw is possible and the battery (packing) can be taken out by removing the connector
Difficult	F	Decomposition of the whole (screw removing)	Cutting	Decomposition of the whole by removing screw is possible, and battery (packing) can be taken out by cutting the connection with nippers etc.
	G	Decomposition of the whole (dismantlement)	Connector removing	Dismantling the whole and the battery (packing) can be taken out by removing the connector
			Cutting	Dismantling the whole and battery (packing) can be taken out by cutting the connection with nippers etc.

Attached table 2 Substances prescribed in 4-1.(18)

Specified CFCs	Trichlorofluorometane
	Dichlorodifluoromethane
	Trichlorotrifluoroethane
	Dichlorotetrafluoroethane
	Chloropentafluoroethane
Other CFCs	Chlorotrifluoromethane
	Pentachlorofluoroethane
	Tetrachlorodifluoroethane
	Heptachlorofluoropropane
	Hexachlorodifluoropropane
	Pentachlorotrifluoropropane
	Tetrachlorotetrafluoropropane
	Trichloropentafluoropropane
	Dichlorohexafluoropropane
	Chloroheptafluoropropane
	Carbontetrachloride
	1,1,1-trichloroethane
CFCs substitute (HCFCs)	Dichlorofluoromethane
	Chlorodifluoromethane
	Chlorofluoromethane
	Tetrachlorofluoroethane
	Trichlorodifluoroethane
	Dichlorotrifluoroethane
	Chlorotetrafluoroethane
	Trichlorofluoroethane
	Dichlorodifluoroethane
	Chlorotrifluoroethane
	Dichlorofluoroethane
	Chlorodifluoroethane
	Chlorofluoroethane
	Hexachlorofluoropropane
	Pentachlorodifluoropropane
	Tetrachlorotrifluoropropane
	Trichlorotetrafluoropropane
	Dichloropentafluoropropane
	Chlorohexafluoropropane
	Pentachlorofluoropropane
	Tetrachlorodifluoropropane
	Trichlorotrifluoropropane
	Dichlorotetrafluoropropane
	Chloropentafluoropropane
	Tetrachlorofluoropropane
	Trichlorodifluoropropane
	Dichlorotrifluoropropane
	Chlorotetrafluoropropane
	Trichlorofluoropropane

CFCs substitute (HCFCs)	Dichlorodifluoropropane
	Chlorotrifluoropropane
	Dichlorofluoropropane
	Chlorodifluoropropane
	Chlorofluoropropane

Attached table 3 Compatibility between thermoplastics resins
(VDI 2243, Part , 30/42)

	Major design basis Plastic	Additives of plastic											
		PE	PVC	PE C/P	PC	PP	PA	POM	SAN	ABS	PBTP	PETP	PMMA
Matrix	PE	1	4	4	4	1	4	4	4	4	4	4	4
	PVC	4	1	4	4	4	4	4	1	2	4	4	1
	PS	4	4	1	4	4	4	4	4	4	4	4	4
	PC	4	3	4	1	4	4	4	1	1	1	1	1
	PP	3	4	4	4	1	4	4	4	4	4	4	4
	PA	4	4	3	4	4	1	4	4	4	3	3	4
	POM	4	4	4	4	4	4	1	4	4	3	4	4
	SAN	4	1	4	1	4	4	4	1	1	4	4	1
	ABS	4	2	4	1	4	4	3	4	1	3	3	1
	PBTP	4	4	4	1	4	3	4	4	3	1	4	4
	PETP	4	4	3	1	4	3	4	4	3	4	1	4
	PMMA	4	1	3	1	4	4	3	1	1	4	4	1

1: Compatible

2: Qualified compatible

3: Compatible if laced

4: Incompatible

Product Certification Criteria for “Personal Computers”

Sept. 10, 2000

1. Environmental Background

According to the “Personal Computer White Paper” issued by Japan Electronic Industry Development Association (hereinafter: JEIDA), in Japan 8,212,000 units of Personal Computer (domestic and overseas shipment) were shipped in total number a year (on year increase of 100% in 1998), of which the Personal Computers used at home accounted for 32.5% (in 1998), according to the “Survey Report concerning Resumption, Disposal and Recycling situations of Used Computers (May, 1999 by JEIDA)”.

The survey report also says 41,000 tons of the used Personal Computers were generated in 1998, of which 11,000 tons from homes and 71,000 tons in 2001 and 133,000 tons in 2003 are estimated.

2. Applicable Products

This Eco Mark Product Category describes the desktop-type PC and note-type PC among “Personal Computer” provided by “Japanese Standard Product Classification” prepared by the Management and Coordination Agency.

Though there is no definition in the “Japanese Standard Product Classification” for the desktop-type PC, server, workstation, and note-type (portable) PC, in this criteria, “any type of personal computers that are set up to use on the desk etc.” was defined as a desktop-type PC based on the concept generally applied by the society. Note type PC was defined as “any type of personal computer that is portable”.

3. Terminology

The definition of “Batteries” is based on the reference documents of the Battery Association of Japan. The definitions of “Reusable”, “Recycling”, “Recycled plastic raw materials”, “Pre-consumer materials” and “Post-consumer materials” are based on the definitions of ISO14021FDIS. “Homopolymer”, “Copolymer” and “Polymer alloy” are quoted from the Physics and Chemistry Dictionary (Iwanami Shoten K.K.).

4. Certification Criteria

4-1. Details of establishing Environmental Criteria

Using the environmental impact items selection table of the product life stage in establishing the criteria, and in consideration of the environmental impact throughout the product lifecycle, the

environmental impact items that are considered to be important are selected, for which qualitative or quantitative criteria is established.

The environmental impact items considered in product category “Personal computer” are as shown in the environmental impact items selection table of the product life stage (X sign and XX sign in the table). The items finally selected for criteria concerning environment among these items are A-1, A-9, B-3, B-5, B-6, B-8, B-9, C-9, D-1, D-2, D-9, E-8, E-9, F-1, and F-9 (XX sign in the table).

In addition, the blank columns in the table show the items not having been subjected to study or those studied in accordance with the other items. Details of establishing the environmental criteria are as follows.

Table 1: Chart for Selecting Environmental Impact Items at Each Stage of Product Life Cycle

Environmental Impact Item	Product Life Stage					
	A. Resource Extraction	B. Manufac- turing	C. Distribu- tion	D. Use/Con- sumption	E. Disposal	F. Recycling
1.Resource consumption	XX		X	XX		XX
2.Discharge of greenhouse gases				XX		
3.Discharge of the ozone layer depleting substances		XX				
4.Destruction of eco systems						
5.Discharge of atmospheric pollutants		XX				
6.Discharge of water pollutants		XX				
7.Discharge/disposal of wastes						
8.Use/discharge of hazardous materials		XX			XX	
9.Other environmental impacts	XX	XX	XX	XX	XX	XX

A-F-9 (Other environmental impacts)

The following points were examined in this item:

(1) Furnishing Environmental Information (Description items to the User Manual)

The Certification Criteria of this category provides for not only the appliance itself but also the supporting system (taking back after use, repair, amount of power consumption and chemical substances used etc.) to reduce the environmental impact of the appliance as an item by which the criteria are established. The applicants alone can never establish these supporting systems and a positive participation of the appliance users are necessary.

Therefore, for the purpose of having the appliance users known the significance of the Eco

Mark certification and trying to reduce the environmental impact caused by PC, to describe the reduction of the environmental impact by complying with the Eco Mark certification criteria in the user manual was selected as a item for establishing the criteria.

A. Resource extraction stage

A-1 Resource consumption

The following points were examined in this item.

- (1) Use of recycled resource
- (2) To comply with the Eco Mark certification criteria for “Printing paper”. (The User Manual)

(1) was taken up to be an examination item because each manufacturer is studying the use of recycled plastic raw materials as an investigation item.

Considering a current technological level, it has not reached yet to the level of setting any numerical criteria, but was selected as an item to establish the criteria from a viewpoint of importance. This item has not been described in the German Environmental Label “Blue Angel”.

As for point (2), the use of non-chlorine bleach paper and its recycled paper was examined because the environmental impact reduction of the attached user manual has as much importance as that for the appliance. The Blue Angel describes the non-chlorine bleach paper as criteria, which is difficult to obtain in Japan due to the regional circumstances. On the other hand, the use of recycled paper, which is not described in the Blue Angel, is prevailing as “utilization of the used paper” in Eco Mark business in which the product category called “Printing paper” is involved. Therefore, the use of the recycled paper was selected as an item to establish the criteria.

The provisions of this item shall not be applied to the attached documents other than user manual of the applicant (an instruction manual for the basic soft etc.) because of the difficulty of applicant’s controlling the paper to be used.

B. Manufacturing Stage

B-3 Discharge of the ozone layer depleting substances

The following points were examined in this item.

- (1) Emission of CFCs and HCFCs (environmental specification by purchase contracts etc.)

(1) must be controlled without exception when considering the influence on the environment. Hazardous substances from PC itself may be discharged after the appliance is abandoned, however, little problem is expected because the criteria is subject to the use limitation and the resumption of hazardous substances. Then, our study was carried out specifying for the emission/discharge of the hazardous substances when products were manufactured. There is no problem in using hazardous substances as described in B-8 if the emission/discharge control (resumption and proper processing, etc.) is properly implemented after the use. Therefore, compliance with the environmental laws and

regulations etc. in the factory location at the time of manufacturing was selected as the criteria.

The measures to control manufacturing, discharge and use of CFCs and HCFCs etc. have been carried out through an international agreement. In this category, the attached table 2 was produced referring to “Law concerning ozone layer protection by regulation of specified substances, etc.” and the criteria were established on the basis that CFCs, carbon tetrachloride and trichloroethane shall be prohibited to use and HCFCs shall not be allowed to discharge at the factory. (the same result as to the packaging materials)

Moreover, as these substances are hardly used in the final assembly factory of PC and little effect is expected unless reduction in use and reduction of emission in the original stage including parts are implemented, the same criteria as the final assembly factory have been established by describing in the parts purchasing contracts so as to reduce the environmental impact tracing back to parts manufacturing factories.

A model of certificate issued by Works manager and parts purchasing contract described in the Eco Mark certification criteria are illustrated as follows:

An example of a certificate of Works Manager

“This is to certify that the factory which the applicant owns proves neither the use of any CFCs, carbon tetrachloride and trichloroethane nor emission of any HCFCs.”

“This is to certify that the factory which the applicant owns proves to comply with the relevant environmental laws and agreements on pollution prevention etc. in the area where the factory is located as for the emission of hazardous substances. The relevant environmental laws are YY.”

“This is to certify that XX factory proves neither the use of the CFCs, carbon tetrachloride and trichloroethane nor the emission of the HCFCs.”

“This is to certify that XX factory proves to comply with the relevant environmental laws and agreements on pollution prevention etc. in the area where the factory is located as for the emission of hazardous substances. The relevant environmental laws are YY.”

An example of parts purchasing contract model

“The parts purchasing contract of the factory owned by the applicant includes an article clearly stating ‘the manufacturing factory of the parts shall comply with the related environmental laws and pollution prevention agreements etc. as for the emission of hazardous substances in the area where the factory is located.’ ”

“The part purchasing contract of the factory owned by the applicant ensures ‘the part purchasing contract of the parts manufacturer includes an article stating that he shall comply with the related environmental laws and pollution prevention agreements etc. as for the emission of hazardous substances in the area where the factory is located.’ ”

“The parts purchasing contract of the factory owned by the applicant includes an article clearly stating ‘the manufacturing factory of the parts shall neither use any CFCs, carbon tetrachloride and trichloroethane nor emit any HCFCs.’ ”

“The part purchasing contract of the factory owned by the applicant ensures ‘the part purchasing contract of the parts manufacturer includes an article stating that the contractor (parts manufacturer) shall neither use any CFCs, carbon tetrachloride and trichloroethane nor emit any HCFCs.’ ”

B-5 Discharge of atmospheric pollutants

The following points were examined in this item.

(1) Emission of hazardous substances

As explained in B-3, it was selected as an item to establish the criteria; the environmental law etc. in the area where the factory is located is complied when the products are manufactured.

B-6 Discharge of water pollutants

The following points were examined in this item.

(1) Discharge of hazardous substances

It is reported that environmental impact of groundwater pollution by semiconductor manufacturing is generated.

As explained in B-3, this item was selected as an item to establish the criteria; the environmental law etc. in the area where the factory is located is complied when the products are manufactured.

According to the Eco Mark Certification Criteria, compliance with the related environmental law etc. in the area where the factory is located is examined within the range for the past five years before the Eco Mark application. Any soil contamination is treated as follows: If a regulation for contaminant was enacted before contamination took place, which was committed within the last five years before the Eco Mark application, it is determined not to comply with the Eco Mark Criteria.

B-8. Use/discharge of hazardous materials

The following points were examined in this item.

(1) Discharge of hazardous substances

As explained in B-3, this item was selected as an item to establish the criteria; the environmental law etc. in the area where the factory is located is complied when the products are manufactured.

C. Distribution stage

C-1 Resource consumption

The following points were examined in this item.

(1) Lightweight and downsizing (space-saving)

This item is difficult to establish any numerical criteria, and therefore was not selected as an item for establishing criteria. However, in the guideline for establishing manual for prior evaluation in designing products for the purpose of promoting the utilization of recycled resources provided for in criteria 4-1. (6), the study for lightweight and downsizing are involved, and thus some consideration may be given to the individual appliance.

D. Use/Consumption stage

D-1 Resource consumption

The following points were examined in this item.

- (1) The performance parts shall be maintained for minimum five years for the repair of the appliance.
- (2) Accepting system of repair shall be prepared to carry out the repair works at the request of appliance users.(Repair system)
- (3) The guarantee period shall be for three years.

(1) and (2) in PC have two points which make the best use of “Long life of the appliance” as a system. The first point is the replacement of parts by the appliance users themselves and the supply of parts for the replacement will be the key issue. The second one is the parts replacement and repair by manufacturers etc. other than the appliance users, and positive acceptance of repair will be important to use the appliances for a long time. The Ministry of International Trade and Industry pointed out "Repair" as an important item to reduce the environmental impact.

Therefore, this item was selected as an item to establish the criteria.

Compliance with this item involves business undertaker's consignments other than the applicant.

A concrete judgment in the examination:

1. “The repair of this appliance will be accepted at the request of the applicant users” or the similar information is clearly described in User Manual, which is submitted to the appliance users.
2. Information of the above 1., which is independent from other information, shall be arranged so that the appliance users can clearly recognize.

The example: The page published only such information, Capitalized letters, to change the style of characters from those of surrounding characters, to be boxed and to change colors.

3. Necessary information for implementing repair works (scope of the repair (content of service), necessary period, expenses and the flow of repairing procedures, etc. for the appliance user), or address etc. to which necessary information is furnished shall be clearly stated.

The example: “Please inform us of the details of breakdown for the repair of this appliance to our service center(TEL:XX).If necessary, we will explain the scope of repair (service content), estimated repair costs, repair periods

and procedures etc.”

Note: Address means telephone and FAX numbers, etc. Assuming the appliance's failure, it is deemed that Internet address alone does not comply with the Criteria.

(3) was not selected as an item to establish the criteria. This is an item described as a criteria in the Blue Angel from the viewpoint of long life of the appliance, but rather the guaranteed matter largely depending on the service strategy of individual manufacturer than the matter related to the environment. Thus judgement was made to exclude it from the criteria.

D-2 Discharge of greenhouse gases

The following points were examined in this item.

- (1) Low power consumption (Conform to the Energy Star).
- (2) Compliance with energy-conservation criteria provided in Law concerning the Rational Use of Energy.

(1) required low power consumption to reduce the emission of material affecting the global warming. Low power consumption has already been tackled by “International Energy Star program” at the Energy Conservation Center Foundation. Therefore, “Compliance with the Energy Star” was selected as the criteria in consideration of the consistency with each program. This category gave priority to the consistency with an each domestic work though the Blue Angel set it as numerical criteria. 4-1.(21) excludes the power consumption at the battery charging.

(2) is provided as the “Law concerning the Rational Use of Energy” similar to (1). As described in an environmental background in the Certification Criteria 1, the compliance with the Law concerning the Rational Use of Energy was selected as the criteria because this was an important item to reduce environmental impact on the aspect of energy conservation.

D-9 Other environmental impacts

The following points were examined in this item.

- (1) Compliance with the safety specification in accordance with IEC950.
- (2) Compliance with VCCI concerning electromagnetic conformance.
- (3) Electromagnetic radiation (influence on health)
- (4) Volume level (Noise Emission)

The safety of the appliance shall conform to IEC (International Electrotechnical Commission) 950, the most widely used as International Standard, or the safety specifications in accordance with this Standard.

Electromagnetic conformance shall conform to VCCI (Voluntary Control Council for Interference by Information technology equipment) so that the electric wave noise generated from the computer etc. shall not give the obstruction to the receiver such as the televisions.

The electromagnetic radiation (healthy influence) from CRT monitor etc. is pointed out. However, “Survey Research concerning influence on health by electromagnetic environment made by

Japan Environment Association” points out the difficulty of clarifying the noxiousness of radiation quoting an article in the magazine, “Occupational Health & Safety” which reports 70mG of radiation from computer display and 10000mG (10G) from electric blanket or electric razor are generated. Based on this report and other survey researches, the Environment Agency has decided that it is not possible to determine the presence of influence on health by the exposure of electromagnetic field at present.

ISO7779 and ISO9296 provide the volume levels. This category has adopted ISO9296 as well as the Blue Angel from the viewpoint of an international compliance and selected the level as an item to establish the criteria referring to the value of the Blue Angel. Reference value of 48 -55dB is the same degree of the volume as a quiet office.

E. Disposal Stage

E-8 Use/discharge of hazardous materials

The following points were examined in this item.

- (1) Neither PBBs nor PBDEs nor chloridization paraffin shall be added as a constituent to the print circuit board.
- (2) Neither PBBs nor PBDEs nor chloridization paraffin shall be added as a constituent to plastic materials.
- (3) Neither cadmium nor lead shall be added as a constituent to plastics.
- (4) Neither carcinogenic substances nor mutagenic nor teratogenic substances shall be added to plastics.
- (5) Neither cadmium nor lead nor mercury shall be added as a constituent to batteries.
- (6) Neither polymer that contains the halogen nor the organic halogen compound shall be used as constituents for plastics (including plastic materials used for packaging).
- (7) Neither substances classified into cancer-causing substances by LARC (Level 1, 2A and 2B) nor cancer-causing substances in MAK list (Class 1, 2 and 3) shall be added as a constituent to the display (LCD). However, mercury and mercury compounds are excluded.

The Chemical Substances are involved in various forms such as contents in PC and use/emission/generation etc. at the Manufacturing Stage.

The content is an environmental impact inherent to the product, and therefore, the portions of the appliance, the substances and the content level are described. Basically, chemical substances are selected as an item to establish the criteria that do not allow any addition at Manufacturing Stage of the products.

The relation between the contents of polyvinyl chloride, polyvinylidene chlorides and bromine flame retarders and generation of dioxin at the time of combustion/wasting is pointed out for (1) and (2) and (6). As a result of the examination under consideration of keeping firesafety, they were selected as items to establish the criteria to evade the generation of the hazardous substances as much as possible. As for the use limitation of PVC, it may be used for miniature parts including coating films and cables etc., and there are not any prevailing substitutes, so it is not established as the criteria at present.

Moreover, an opinion was raised that there is no need to restrict the contents and use when

any appliances use hazardous substances and the resumption of them was done.

F Recycling Stage

F-1 Resource consumption

The following points were examined in this item.

Designed for recycling and long-term use

- (1) The appliance shall comply to “a design suitable for the recycling of the appliance” in the attachment table 1, based on the “Guideline of preparing a prior evaluation manual in products designing to contribute to the promotion etc. of the use of the recycled resource.”
- (2) The packaging material shall conform to the “Guidelines on the Preparation of Pre-assessment Manual for Product Design Contributing to the Promotion, etc. of the Utilization of Recycled Resources.”

Plastic Materials and Batteries

- (3) Parts made of plastic shall be produced from a homopolymer or a copolymer.
- (4) The plastic case parts shall consist of two separable polymers or polymer blends at the most.
- (5) Large –size case parts made of plastic must be so designed as to ensure to recycle as plastic materials.
- (6) Batteries shall be so designed as to ensure the user to change or remove them. Also batteries that are not assumed for the appliance user to remove shall be removable or replaceable.

Resumption and recycling system

- (7) Taking back, re-use or recycling of appliance
- (8) Taking back, re-use or recycling of batteries

Marking

- (9) Plastic parts shall be marked in accordance with ISO11469.
- (10) Batteries shall be marked in accordance with the marking guideline for compact rechargeable batteries of the Battery Association of Japan.
- (11) Plastic used for packaging shall be marked in accordance with ISO11469.

Designed for recycling and long-term use

(1) As for the recycling design and long term use, not only establishing materials regulations but also how PC, which is the compound body of the unit, is assembled will be an important point of long life, re-use and recycling. In this category, the guideline prepared by the Waste Disposal and Recycling Committee of the Industrial Structure Council of the Ministry of International Trade and Industry was referred to. As the guideline has no regulations by the numerical value etc, it shall be confirmed at the time of examination that the appliance design is made in accordance with the viewpoint of the guideline.

Appendix 1 “A suitable design for the recycling of the appliance” is found in the list that is the criteria in the Blue Angel, and this category applies the same basic requirement, too. The Blue Angel assumes to recycle the appliance as substances, however, an idea that is considered to reuse it as a part (reuse designing) has been developed in this category.

“A suitable design for the recycling of the appliance” was prepared as a common design specification so that anyone, whoever resumes, can easily reuse or recycle the appliance. In con-

sideration of various measures for environmental protection, it is not necessary to comply with "A suitable design for the recycling of the appliance" when such a system as the applicant receives all its own appliances marked with Eco Mark certification and reuses /recycles them is built. Acceptance and reuse/recycling on consignment under the responsible of an applicant is also involved in such a recovery system.

Plastic materials and batteries

(3) to (6) are the items to have established criteria in the Blue Angel. It is important to use the resin, which has generality or is made of a single material, to proceed the re-use and recycling of the appliance. In this category, it is selected as an item to establish criteria for proceeding reusing /recycling.

Priority was given to the reuse as substances rather than to the recovery as energy.

A large case parts indicate the parts of 25g or more in weight or having a flat area more than 200mm² here.

As for removal of batteries, even if some of which are not removable by the appliance users, it is allowed when they are removable by dealers in order to proceed the resumption of appliance itself. Moreover, it was understood to be important that the manufacturer etc. could replace batteries without changing the whole printed circuit board when repairing the appliance. To be more concrete, based on the "Assessment manual for simplification of removal of NiCad battery" of the "Research investigation report concerning the promotion of recycling of used NiCad battery as a Government subsidized business in 1991 issued by Clean Japan Center Association", attached table 1 "Facility of disassembling a battery" was developed.

Resumption and recycling system

With respect to (7) and (8), according to "Investigation report of JEIDA concerning the situation of the resumption, processing and recycling of used computers", the Personal Computers which are the subject of this category are expected to generate approximately 70,000 tons in 2001, 130,000 tons in 2003 and the same level afterwards, so that the resumption and reuse of the used appliances are becoming more important issue.

Moreover, the hazardous substances such as heavy metals are used for PC, and it is also important not to discharge these substances into the environment by using them in circulation. When there is a product, which should use the hazardous substances, it is expected to arrange a system of withdrawal and reusing/recycling in advance.

Therefore, this item was selected as an item to establish criteria.

Compliance with this item may include the assignment to business entity other than the applicant.

The recovery is described as the criteria in the Blue Angel.

In Japan, permissions of head of cities, towns or villages are required for the resumption of the appliance classified as the non-industrial waste under the law concerning waste disposal and cleaning, and the buy-back will cause a difficult situation to form any system from the viewpoint of the cost. Therefore the draft of certification criteria described that only Personal Computers for the business purpose shall be the subject of resumption for the time being and according to the

judgement of Eco Mark Committee for Product Certificate, this criterion was to be applied to Personal Computers as the non-industrial waste from home because of undeveloped legal system regarding withdrawal and reusing/recycling. However, Ministry of International Trade and Industry began to study setting personal computers as specified recycling products in the “Law concerning promoting efficient use of resources” after general publication of the draft certification criteria. So regarding withdrawal of appliances as industrial wastes, certification criteria were settled as the draft and regarding withdrawal of appliances as domestic wastes, certification criteria were determined to partly revise after implementation of legal system. There is no definition for resumption expenses in this category.

Moreover, though the Blue Angel describes the resumption place, no criteria was established by judging that there should be no problem in investigating the mutual certification because the system maintenance of the resumption, reuse and recycling need not be restricted to the system of bringing to the resumption place but be established according to the circumstances of respective region.

Marking

(9) to (11) were selected as items of establishing the criteria to ensure smooth disposal at the time of resumption by attaching the markings to plastic and batteries in which the used materials are difficult to confirm. Plastic shall be marked in accordance with International Standard ISO 11469. The parts to be marked exclude the parts weighing less than 25g or having a flat area less than 200mm² in order to give a priority to the international conformity.

The Battery Association of Japan have produced the guideline concerning marking to assure the smooth sorting out of compact recharging batteries. This category was determined to follow it.

4-2. Others

One of the features of the Personal Computers is an expansion of its function after the purchase, and therefore, there is a possibility that it will not meet the Eco Mark Certification Criteria by enhancing the function after the user purchases appliances with the Eco Mark.

The Eco Mark product certification examination of this category shall be based on the specification at the time of sales, which is recommended to the consumer.

The product classification shall be filled in “application for Eco Mark product certification and use” referring to the example of attached table 4. A separate paper may be attached stating that “filling in the attached paper”.

Regarding use of Eco Mark, which can be used in the advertisement for the certified product, examples of Eco Mark lettering and environmental information marking are shown as follows.

- When printer etc., which are not subject to this category, are included in the sets;
Caution is required in order to distinguish the certified appliances when the Eco Mark is used. Example: “System unit and CRT monitor are certified as Eco Mark products”
- When the Eco Mark is displayed in the instruction manual;
Eco Mark lettering and environmental information marking are as shown in certification criteria 6.(2). It is free to note “Recycled waste paper • XX %” apart from the Eco Mark.
- When the Eco Mark is displayed in the packaging paper;

Eco Mark lettering and environmental information marking are as shown in certification criteria 6.(2).

Attached table 4

“Application for Eco Mark product certification and use”	“2. Product brand name”
<ul style="list-style-type: none"> - Model name shall be described clearly when applied for each model - Series name shall be described clearly when applied for each series 	
“Application for Eco Mark product certification and use”	“3. Model”
<ul style="list-style-type: none"> - When applied for each model It shall be clearly stated that the applied appliance falls under either system unit, CRT monitor, LCD monitor, keyboard mouse or note type PC. Product numbers etc. shall be clearly stated as well. - When applied for each series It shall be clearly stated that the applied appliance falls under either system unit, CRT monitor, LCD monitor, keyboard mouse or note type PC. Model names and product numbers shall be clearly stated as well. 	

(This table is a list based on the environmental criteria 4-1. (4)(5)(6))

Plastic materials list of "Personal computer"

The applicant name and signature/seal _____

(Company seal of the applicant)

Entry date(Date/Month/Year)

Brand name of personal computer (name)

- ☐ System Unit (Please mark the corresponding appliance. Appliances more than one shall be reported separately.)
- ☐ CRT monitor
- ☐ LCD monitor
- ☐ Keyboard
- ☐ Mouse

Addition of polymer including halogen	with / without	Please tick which applies.
or organic halogenated compound		

[illegible]

Table 1 List of Certificates

				Series model name													
				Each model name		(1)	(2)	(3)	(4)			(n)					
				Appliance name *1													
NO	Certification Criteria	Item	Necessary Certificates etc.	Attached or not	Secretariat	Attached or not	Secretariat	Attached or not	Secretariat	Attached or not	Secretariat	.....	.....	Attached or not	Secretarist	Special Remarks
1	4-1.(1)	Conformity to "Suitable design for recycling of appliance" in Appendix 1.	Appendix 1 "Suitable design for recycling of appliance".													When the applicant resumes, reuses or recycles individually without applying Appendix 1, a certificate stating to that effect shall be submitted.	
2	4-1.(2)	The shortest maintenance periods of performance parts for repair.	A certificate and the User Manual, etc. clearly stating the shortest maintenance periods of performance parts for repair.														
3	4-1.(3)	Undertaking of repair.	A certificate clearly stating the implementation of repair according to request of appliance user and the User Manual etc. clearly stating the preparation of repairing system.														
4	4-1.(4)	Plastic materials.	A certificate clearly stating the compliance with the item of certification criteria and the list of plastic materials using those in Appendix 2.														
5	4-1.(5)	Plastic materials.	A certificate clearly stating the compliance with the item of certification criteria and the list of plastic materials using those in Appendix 2.														
6	4-1.(6)	Plastic materials.	A certificate clearly stating the compliance with the item of certification criteria and the list of plastic materials using those in Appendix 2.														
7	4-1.(7)	Batteries (replace by appliance user).	Certificates for the used part of battery and those for detaching method etc. based on Attached table 1.														
8	4-1.(8)	Battery (replacement of battery for which the detaching by appliance user is not expected).	Certificates for the used part of battery and those for detaching method etc. based on Attached table 1.														
9	4-1.(9)	Resumption, reuse or recycling of appliance after used.	Manual stating that resumption, reuse or recycling system has been established.														
10	4-1.(10)	Resumption, reuse or recycling of battery replaced by appliance user.	Manual stating that resumption, reuse or recycling system has been established.														
11	4-1.(11)	Plastics (halogen).	A plastic materials list (Appendix 2) clearly stating raw material supplier's name and whether polymer containing halogen or organohalogen compounds is added or not.														
12	4-1.(12)	Plastics (flame retarder).	A certificate clearly stating the compliance with the item of criteria and a parts bought note etc.														

Table 1 List of Certificates

Table 1 List of Certificates

				Series model name															
				Each model name		(1)	(2)	(3)	(4)					(n)					
				Appliance name *1															
NO	Certification Criteria	Item	Necessary Certificates etc.	Attached or not	Secretariat	Attached or not	Secretariat	Attached or not	Secretariat	Attached or not	Secretariat	Attached or not	Secretariat	.....	.....	Attached or not	Secretariat	Special Remarks
13	4-1.(13)	Plastics (heavy metals).	A certificate clearly stating the compliance with the item of criteria.																
14	4-1.(14)	Plastics (carcinogen etc.).	A certificate clearly stating the compliance with the item of criteria.																
15	4-1.(15)	Batteries (heavy metals).	A certificate issued by battery manufacturer.																
16	4-1.(16)	Batteries (marking).	A certificate concerning the presence of marking.																
17	4-1.(17)	Print circuit board (flame retarder).	A certificate clearly stating the compliance with the item of criteria, in which the name of flame retarder used is clearly mentioned.																
18	4-1.(18)	Manufacturing Stage.	A certificate issued by Works Manager concerning the compliance with environmental regulations in the region where factory is located without any violation etc..															A part procurement contract is also acceptable for parts suppliers who directly supply parts.	
19	4-1.(19)	Conforming to Energy Star Program.	A certificate conforming to Energy Star Program.															Certificate: Copies etc. of reports of the products using Energy Star Logo.	
20	4-1.(20)	Conformity to Law concerning the Rational Use of Energy.	A certificate clearly stating the compliance with the item of criteria.																
21	4-1.(21)	Power supply switch.	A certificate clearly stating the compliance with the item of criteria.																
22	4-1.(22)	Function trouble when power supply plug is pulled out.	A certificate clearly stating the compliance with the item of criteria.																
23	4-1.(23)	Noise Emission.	Examination record.																
24	4-1.(24)	Furnishing of Information.	Corresponding pages of the manual for furnishing of information.																
25	4-1.(25)	Furnishing of Information.	Ditto																
26	4-1.(26)	Furnishing of Information.	Ditto																
27	4-1.(27)	Furnishing of Information.	Ditto																
28	4-1.(28)	Furnishing of Information.	Ditto																
29	4-1.(29)	Furnishing of Information.	Ditto																
30	4-1.(30)	Furnishing of Information.	Ditto																
31	4-1.(31)	Furnishing of Information.	Ditto																
32	4-1.(32)	IEC950	A certificate conforming to the safety specification in accordance with IEC950.																
33	4-1.(33)	VCCI	A certificate conforming to VCCI.															Certificate: Copies etc. of report for conformity.	
34	4-1.(34)	LCD	A certificate clearly stating the compliance with the item of criteria.																
35	4-1.(35)	The User Manual.	Brand and manufacturer's name of printing paper to be used.																
36	4-1.(36)	Packaging material.	A certificate concerning presence of marking.																
37	4-1.(37)	Packaging material.	Description for the conformity to the guideline. (1. Document stating contents of the evaluation manual based on the guideline 2. Nane of the pakaging materials used)																

Table 1 List of Certificates

				Series model name													
				Each model name		(1)		(2)		(3)		(4)				(n)	
				Appliance name *1													
NO	Certification Criteria	Item	Necessary Certificates etc.	Attached or not	Secretariat	Attached or not	Secretariat	Attached or not	Secretariat	Attached or not	Secretariat	.....	.....	Attached or not	Secretarist	Special Remarks	
38	4-1.(38)	Packaging material.	A certificate issued by the packaging materials suppliers, which clearly states whether CFCs or HCFCs is used or not.														
39	4-1.(39)	Packaging material.	A certificate issued by the plastic packaging material suppliers, which clearly states plastic materials used and whether polymer containing hologen or organohalogen compounds is added or not.														

Entry method
1) Both a single model and series model may be applied for.
2) Fill "certificate 1- (1)" etc. in the column of "whether attached or not " when any documents are attached.
3) Do not fill in the column of "Secretariat".
*1 System unit, CRT monitor, Keyboard, Mouse, LCD monitor, Note type PC

Application Seal